



## Progression of Skills

The following "Progression of Skills" pages take a Science topic (eg Forces and magnets) and show you the year groups, who does that topic and the skills they are developing. There is clear progression from one year group to another.

## Working Scientifically - Progression through KS1 and KS2 (from NC - with statutory statements in Bold)

Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
I can explore the world around me and raise my own simple questions.	<b>I can raise my own relevant questions about the world around me.</b>	I can use my science experiences to explore ideas and raise different kinds of questions.
I can experience different types of science enquiries, including practical activities.	<b>I can be given a range of scientific experiences and use different types of science enquiries to answer questions.</b>	I can talk about how scientific ideas have developed over time
<b>I can ask simple questions and begin to recognise different ways in which I might answer scientific questions.</b>	I can start to make my own decisions about the most appropriate type of scientific enquiry I might use to answer questions.	<b>I can select and plan the most appropriate type of scientific enquiry to use to answer scientific questions.</b>
<b>I can carry out simple tests.</b>	<b>I can set up simple practical enquiries, comparative and fair tests.</b> I can recognise when a simple fair test is necessary and help to decide how to set it up.	<b>I can</b> recognise when and how to set up comparative and fair tests and <b>explain which variables need to be controlled</b> and why.
<b>I can use simple features to compare objects, materials and living things and, with help, decide how to sort and group them (identifying and classifying) .</b>	I can talk about criteria for grouping, sorting and classifying; and use simple keys.	I can use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment.
I can ask people questions and use simple secondary sources to find answers.	I can recognise when and how secondary sources might help me to answer questions that cannot be answered through practical investigations.	I can recognise which secondary sources will be most useful to research my ideas and begin to separate opinion from fact
I can observe closely, using simple equipment I can, with help, observe changes over time.	<b>I can make systematic and careful observations</b> I can help to make decisions about what observations to make, how long to make them for and the type of simple equipment might be used.	I can make my own decisions about what observations to make, what measurements to use, how long to make them for and whether to repeat them.
I can, with guidance, begin to notice patterns and relationships.	I can begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them.	I can look for different causal relationships in data and identify evidence that refutes or supports my own ideas.
<b>I can</b> use simple measurements and equipment (e.g. hand lenses, egg timers) to <b>gather data.</b>	<b>I can take accurate measurements using standard units and learn how to use a range of (new) equipment, such as data loggers / thermometers appropriately.</b>	<b>I can</b> choose the most appropriate equipment to <b>make measurements with increasing precision</b> and explain how to use it <b>accurately</b> . <b>I can take repeat measurements where appropriate.</b>
<b>I can record simple data.</b>	<b>I can collect and record data</b> from my observations and measurements in a variety of ways: notes, <b>bar charts and tables</b> , standard units, <b>drawings, labelled diagrams, keys</b> and make decisions about how to record and analyse my data.	<b>I can</b> decide how to <b>record data and results of increasing complexity</b> from a choice of familiar approaches: <b>scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</b>
<b>I can use my observations and ideas to suggest answers to questions.</b> I can talk about what I have found out and how I found it out.	<b>I can</b> , with help, look for changes, patterns, similarities and differences in my data in order to <b>draw simple conclusions and answer questions using scientific evidence.</b>	<b>I can identify scientific evidence that has been used to support or refute ideas or arguments.</b>
I can, with help, record and communicate findings in a range of ways and begin to use simple scientific language.	<b>I can use relevant scientific language</b> to discuss ideas <b>and communicate findings</b> in ways that are appropriate for different audiences, <b>including using oral and written explanations, displays or presentations of results and conclusions.</b>	<b>I can</b> use relevant scientific language and illustrations to discuss, communicate and justify scientific ideas, <b>use oral and written forms such as displays and other presentations to report my findings, conclusions, causal relationships and explanations of degree of trust in results.</b> I can talk about how scientific ideas have developed over time.
	<b>I can</b> , with support, <b>raise new questions from the data, make predictions for new values</b> within or beyond the data <b>and suggest improvements</b> to what I have already done.	<b>I can use my results to make predictions and</b> identify when <b>further observations, comparative and fair tests</b> might be needed.

Wilkinson Primary School  
Science Progression of Skills Overview

**Animals Including Humans**

Science Progression of skills	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Animals including humans  Working Scientifically	Children can explain and use senses. They can observe, describe and record living things. Children can present information in charts and tables.	Children can explore and use senses. They can describe and observe living things. Children can communicate what happens in their world as well as making and recording observations and comparisons. They can present information in charts and tables.	Children are able to ask relevant questions and using different types of scientific enquiries to answer them. They can set up simple practical enquiries, comparative and fair tests. Children can make systematic and careful observations and record findings using scientific language, drawings, labelled diagrams, keys, bar charts and tables. They can use results to draw simple conclusions. Also, they can identify differences, similarities or changes related to simple scientific ideas and processes. Children can use straightforward scientific evidence to answer questions or to support their findings.	Children can take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. They are able to gather, recording, classifying and presenting data in a variety of ways to help in answering questions. Children can report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. They make predictions for new values, suggest improvements and raise further questions.	Children are able to plan different types of scientific enquiries to answer questions. They can also take measurements using a range of scientific equipment. Children can record data and results of increasing complexity using scientific diagrams and labels classification keys, tables, bar and line graphs. They can use test results to make predictions to set up further comparative and fair tests. Also, children are able to report and present findings from enquiries, including conclusions.	Children can recognise and control variables where necessary. They can take measurements with increasing accuracy and precision, taking repeat readings when appropriate. Children can record data with increasing complexity including scatter graphs. They can present findings including casual relationships and explanations of a degree of trust in results, in oral and written forms such as displays and other presentations. Also, children can identify scientific evidence that has been used to support or refute ideas or arguments.

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Science Progression of Skills Overview

**Earth and Space**

Science Progression of skills	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Earth and Space  Working Scientifically					<p>Children can plan different types of scientific enquiries to answer questions. They can take measurements, using range of scientific equipment. They are able to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs. Children can use test results to make predictions to set up further comparative and fair tests and report and present findings from enquiries, including conclusions.</p>	

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**Electricity**

Science Progression of skills	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Electricity  Working Scientifically				<p>Children can take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. They can gather, record, classify and present data in a variety of ways to help in answering questions. They can also report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Children can make predictions for new values, suggest improvements and raise further questions.</p>		<p>Children are able to recognise and control variables where necessary. They can take measurements with increasing accuracy and precision, taking repeat readings when appropriate. They can also record data with increasing complexity including scatter graphs. Children can present findings including casual relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations. They can identify scientific evidence that has been used to support or refute ideas or arguments.</p>

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**Everyday Materials**

Science Progression of skills	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Everyday Materials  Working Scientifically	Children can think about what is expected to happen. They can turn ideas into a form that can be tested. They are able to make observations/ comparisons and record them. Children can decide if a test is fair.	Children can turn ideas into a form that can be tested. They can think about what is expected to happen. They can also make and record observations/ comparisons. Children can decide if a test is fair.				

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**Evolution and Inheritance**

Science Progression of skills	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Evolution and Inheritance  Working Scientifically						<p>Children can recognise and control variables where necessary. They are able to take measurements with increasing accuracy and precision, taking repeat readings when appropriate. Also, children can record data with increasing complexity including scatter graphs. They can present findings including casual relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations. Children can identify scientific evidence that has been used to support or refute ideas or arguments.</p>

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Science Progression of Skills Overview

**Forces and Magnets**

Science Progression of skills	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Forces and Magnets  Working Scientifically			<p>Children can ask relevant questions and use different types of scientific enquiries to answer them. They can set up practical enquiries, comparative and fair tests. Also, they can make systematic and careful observations. Children can record findings using scientific language, drawings, labelled diagrams, keys, bar charts and tables. They can use results to draw simple conclusions. Children are able to identify differences, similarities or changes related to simple scientific ideas and processes. They can use straightforward scientific evidence to answer questions or to support their findings.</p>		<p>Children can plan different types of scientific enquiries to answer questions. They can take measurements, using a range of scientific equipment. Also, they can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs. Children can also use test results to make predictions to set up further comparative and fair tests. They can report and present findings from enquiries, including conclusions.</p>	



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Science Progression of Skills Overview

**Light**

Science Progression of skills	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Light Working Scientifically	Children can make observations/ comparisons and explain them. They can make suggestions how to investigate an idea.		Children can ask relevant questions and using different types of scientific enquiries to answer them. They are able to set up simple practical enquiries, comparative and fair tests. They make systematic and careful observations and record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Children can use results to draw simple conclusions. They identify differences, similarities or changes related to simple scientific ideas and processed. Also, they can use straightforward scientific evidence to answer questions or to support their findings.			Children can recognise and control variables where necessary. They can take measurements with increasing accuracy and precision, taking repeat readings when appropriate. Also, they can record data with increasing complexity including scatter graphs. Children can present findings including casual relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations. They identify scientific evidence that has been used to support or refute ideas or arguments.

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**Plants**

Science Progression of skills	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Plants  Working Scientifically	Children can turn ideas into a form that can be tested. They can make/ record observations and use results to communicate what happened. Children are able to draw conclusions.	Children can turn ideas into a form that can be tested. They can make and record observations and use results to draw conclusions.	Children can ask relevant questions and using different types of scientific enquires to answer them. They can set up simple practical enquires, comparative and fair tests. Also, children can make systematic and careful observations. They can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Children can use results to draw simple conclusions. They can identify differences, similarities or changes related to simple scientific ideas and processes. They can use straightforward scientific evidence to answer questions to support their findings.			

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**Properties and Changes of Materials**

Science Progression of skills	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Properties and changes of Materials  Working Scientifically					<p>Children are able to plan different types of scientific enquiries to answer questions. They can take measurements, using a range of scientific equipment. They are also able to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs. Children can use test results to make predictions to set up further comparative and fair tests. They can report and present findings from enquiries, including conclusions.</p>	

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**Rocks**

Science Progression of skills	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Rocks  Working Scientifically			<p>Children can plan different types of scientific enquiries to answer questions. They are able to take measurements, using a range of scientific equipment. Children can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs. They can use test results to make predictions to set up further comparative and fair tests. Also, children can report and present findings from enquiries, including conclusions.</p>			

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**Seasonal Changes**

Science Progression of skills	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Seasonal Changes  Working Scientifically	Children can make observations and comparisons and explain them. They can make suggestions how to investigate an idea.					

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**Sound**

Science Progression of skills	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Sound  Working Scientifically		Children can make and record observations/ comparisons. They can also draw conclusions.		Children can take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. They can gather, record, classify and present data in a variety of ways to help in answering questions. Also, they can report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Children can make predictions for new values, suggest improvements and raise further questions.		

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**States of Matter**

Science Progression of skills	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
States of Matter  Working Scientifically				<p>Children can take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. They can gather, record, classify and present data in a variety of ways to help in answering questions. Children are able to report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Also, they can make predictions for new values, suggest improvements and raise further questions.</p>		